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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,502	10/30/2003	Regis J. Crinon	MSI-1624US	8051

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KLARQUIST SPARKMAN, LLP
ONE WORLD TRADE CENTER
121 S. W. SALMON STREET, SUITE 1600
PORTLAND OREGON, OR 97204

EXAMINER

SUN, SCOTT C

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/697,502	Applicant(s) CRINON ET AL.	
	Examiner Scott Sun	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34,35,39,40 and 43-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34,35,39,40,43-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/18/2006 has been entered.

Response to Amendment

2. Applicant's amendments made in response to previous rejections under 35 U.S.C. 112 have been noted. Accordingly, rejections under 35 U.S.C. 112 are withdrawn.

Response to Arguments

3. Applicant's arguments with respect to the pending claims, 34, 35, 39, 40, 43-76, have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 34, 35, 39, 40, 43, 47-56, 60-62, 66-76 are rejected under 35

U.S.C. 103(a) as being unpatentable over Huang et al. (PG Pub# US 2002/0061073 A1)

in view of Gaddam (PG Pub# US 2002/0191712) and further in view of Ribas-Corbera et al. (PG Pub# US 2003/0053416 A1).

6. As per claim 34, Huang discloses in a receiver (figure 4), a method comprising:

Detecting a descriptor (control message) within data transmitted by a transmitter;
(paragraph 71);

Obtaining rate (modulation rate) information from the descriptor (paragraph 71);

Although Huang discloses increasing redundancy in the data and using a different modulation rate (paragraph 109), Huang does not disclose explicitly selecting between conventional and robust channels. However, Gaddam discloses a method for selecting between conventional (standard stream) and robust channel (robust stream), wherein relative to data of the conventional channel, data of the robust channel have a higher level of robustness to transmission errors due to an increase of redundancy in the data of the robust channel (paragraphs 33, 34). Teachings of Huang and Gaddam are from the same art of signal transmission/broadcasting, particularly in transmission quality control.

Therefore, at the time of the invention it would have been obvious to combine Huang's invention with Gaddam's invention by adding Gaddam's robust channel mechanism to Huang's receiver. The motivation for doing so would have been to

increase flexibility in carrying data of varying priority and rates (Gaddam, paragraphs 9, 10).

Teachings of Huang and Gaddam combined does not disclose expressly a set of buffer parameters and buffering the received data until a buffer contains more than an initial buffer fullness values included within the buffer parameters. Ribas-Corbera teaches identifying a corresponding set of buffer parameters (RBF) from a descriptor; configuring memory resources (buffer size) and flow control logic (rate and initial fullness) to provide elementary stream acquisition according to guidelines embodied by the identified set of buffer parameters; identifying a corresponding set of buffer parameters from a descriptor, and buffering the received data until a buffer contains more than an initial buffer fullness values included within the buffer parameters (paragraphs 8, 9, 28-30, 34-35). Examiner notes that Ribas-Corbera teaches a set of buffer parameters designating the RBF (rate, buffer size, and initial fullness) values of the receive buffer. Teachings of Huang, Gaddam and Ribas-Corbera are from the same art of signal transmission/broadcasting.

Therefore, at the time of the invention it would have been obvious to combine teachings of Huang and Gaddam and further with teachings of Ribas-Corbera by adding Ribas-Corbera's "leaky bucket" algorithm to Huang's transmitter/receiver. The motivation for doing so would have been to minimize start-up delay by using the smallest buffer size allowed by the "leaky bucket" algorithm (Ribas-Corbera, paragraph 9-10)

7. Regarding claim 35, Huang, Gaddam and Ribas-Corbera combined disclose claim 34, wherein Ribas-Corbera further discloses an algorithm for reconfiguring the memory resources and the flow control logic on a receiver upon receipt of a descriptor having updated data (paragraph 25-48).

8. Regarding claim 43, Huang, Gaddam and Ribas-Corbera combined disclose claim 34, wherein Huang further discloses monitoring reception characteristics and statistics (noise level) for use in the selecting (paragraph 79);

9. Regarding claim 47, Huang, Gaddam and Ribas-Corbera combined disclose claim 34, wherein Gaddam further discloses the conventional channel is a first portion of transmission channel and the robust channel is a second portion of the transmission channel (paragraph 33). Examiner notes that Gaddam teaches the robust stream can be embedded into the standard stream, and therefore the combination of robust and standard streams would make up the overall channel.

10. Regarding claim 48, Huang, Gaddam and Ribas-Corbera combined disclose claim 47, wherein Ribas-Corbera further discloses the descriptor includes multiple sets of buffer parameters (sets of leaky bucket parameters, paragraph 34), and wherein the multiple sets address transmission with different degrees of robustness to transmission errors such that rate for the conventional channel and rate for the robust channel vary from set to set (paragraph 34).

11. Regarding claim 49, Huang, Gaddam and Ribas-Corbera combined disclose claim 47, wherein Naegel further discloses rate for the transmission channel exceeds rate for the conventional channel and exceed rate for the robust channel by an amount

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that varies depending on transmission robustness (column 9, lines 1-6). Examiner asserts that total data rate for the transmission channel (upstream carrier) is the sum of rates for each channel. Because rate for each channel vary depending on noise level (higher noise level reduces SNR, or data rate), the total rate would exceed each channel rate also depending on noise level (transmission robustness).

12. Regarding claims 50 and 51, Huang, Gaddam and Ribas-Corbera combined disclose claim 34, where Huang further discloses the relatively higher level of robustness of the data of the robust channel is in terms of increased use of cyclical redundancy codes within the data of the robust channel (paragraph 69).

13. Regarding claim 52, Huang, Gaddam and Ribas-Corbera combined disclose claim 34. Examiner notes the method of claim 34 is performed by computing means in teachings of Huang, Naegel and Ribas-Corbera.

14. Claims 39, 40, 53-56, 60-62, 70-72, 74-76 are substantially similar to the above rejected claims. The same rejections are applied.

15. Regarding claim 66, Huang, Gaddam and Ribas-Corbera combined disclose claim 62. Examiner asserts that in combining teaching of Huang with teachings of Naegel, and Ribas-Corbera, the buffer parameters of Huang would be applied to buffers of a receiver, and would corresponding with the channels (conventional or robust) the buffers are designed to work with.

16. Regarding claim 67, Huang, Gaddam and Ribas-Corbera combined disclose claim 62, wherein Ribas-Corbera further discloses the data includes packets for video stream (paragraph 18).

17. Regarding claim 68, Huang, Gaddam and Ribas-Corbera combined disclose claim 62, wherein Ribas-Corbera further discloses identifying the buffer size parameter includes selecting the buffer size parameter from one of the multiple buffer models (paragraph 37).

18. Regarding claim 69, Huang, Gaddam and Ribas-Corbera combined disclose claim 62, wherein Ribas-Corbera further discloses the identifying of buffer size parameter includes interpolating between plural buffer size parameters of plural of the multiple buffer models (paragraph 37).

19. Regarding claim 73, Huang, Gaddam and Ribas-Corbera combined disclose claim 72, wherein Ribas-Corbera further discloses based at least in part upon updated rate of the data for the selected channel, identifying in the receiver a new buffer size parameter from among the multiple buffer models (paragraph 36); reconfiguring the buffer in the receiver according to the new buffer size parameter (paragraph 37).

Examiner notes that Ribas-Corbera teaches buffer parameters are computed according to R (rate). Subsequently, choosing a set of parameter to use for the buffer depends on the bit rate. In addition, Huang teaches bit rate can change depending on the transmission quality. In combining teachings of Ribas-Corbera and Huang, it is clear that a change in bit rate causes new buffer parameters to be computed to configure the buffer reconfigure the buffer in the receiver to prevent it from underflowing (Ribas-

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Corbera, paragraph 30). Examiner notes that Ribas-Corbera also teaches the technique is applied to VBR (variable bit rate) transmissions.

20. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Ribas-Corbera, Gaddam, and further in view of Jollota et al (PG Pub # 2004/0142699).

21. Regarding claim 44-46, Huang, Gaddam and Ribas-Corbera combined disclose claim 43, but does not disclose monitoring various transmission characteristics.

However, Jollota discloses monitoring symbol rate, signal-to-noise ratio, packet extent corruption (frame error rate), and other transmission characteristics (paragraph 23, 24).

Teachings of Huang, Gaddam, Ribas-Corbera, and Jollota are from analogous field of signal transmission, and specifically of transmission quality.

Therefore, it would have been obvious for a person of ordinary skill at the time of invention to combine teachings of Huang, Gaddam, Ribas-Corbera, and further with teachings of Jollota by monitoring any one or combination of the signal quality characteristics for the benefit of accurate determining transmission quality.

22. Claims 57-59, 63-65 are substantially similar to the above rejected claims. The same rejections are applied.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Sun whose telephone number is (571) 272-2675. The examiner can normally be reached on M-F, 10:30am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS


KIM HUYNH
SUPERVISORY PATENT EXAMINER
8/29/05